Questions and Answers Bovine Spongiform Encephalopathy (BSE)

Q: What is the USDA policy in regard to Bovine Spongiform Encephalopathy (BSE), and what actions has USDA taken?
A: The USDA policy has been to be pro-active and preventative. APHIS has taken measures in surveillance, prevention, education, and response. Import restrictions have been in place since 1989, and active surveillance efforts began in 1990. The USDA continually monitors and assesses all ongoing events and research findings regarding spongiform encephalopathies, as new information and knowledge may lead to revised conclusions and prevention measures. APHIS has also created a Transmissible Spongiform Encephalopathy (TSE) Working Group to analyze risks of BSE to the United States, disseminate accurate information about the TSE's, and act as a reference source for responding to questions about TSE's.

Q: Is APHIS working with other agencies and groups to coordinate efforts?
A: Yes. APHIS has actively shared information and met with State and Federal agencies, including the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Food Safety and Inspection Service (FSIS), the National Institutes of Health (NIH), and stakeholders to assure we are taking the proper actions in response to changing knowledge and information concerning BSE.

Q: Is BSE a notifiable disease in the United States?
A: Yes. Under Title 9 Code of Federal Regulations, Parts 71 and 161, BSE is a reportable disease by accredited veterinarians.

Q. What types of BSE surveillance are we doing?
A: USDA-APHIS, in cooperation with USDA-FSIS and State diagnostic laboratories, has a comprehensive surveillance program. APHIS educates veterinary practitioners, veterinary laboratory diagnosticians, industry and producers on the clinical signs and pathology of BSE. APHIS monitors the remaining cattle imported from the United Kingdom. Since 1990, more than 60 veterinary diagnostic laboratories across the United States and USDA's National Veterinary Services Laboratories continue to examine hundreds of cattle brains each year submitted from adult cattle displaying neurologic signs either at slaughter or on the farm. FSIS performs antemortem slaughter inspection at all federally-inspected slaughter establishments, and inspectors are alert for central nervous system (CNS) disorders.

Any CNS suspect animals are condemned and tested. Public health laboratories also submit to APHIS any samples that have tested negative for rabies. The network of private veterinary practitioners that refers unusual cases to veterinary schools or State diagnostic laboratories around the United States provides an extensive informal but important surveillance system. USDA has trained more than 250 State and Federal field veterinarians located throughout the United States in the recognition and diagnosis of foreign animal diseases, including BSE.

The Veterinary Medical Data Base maintained by Purdue University compiles diagnoses submitted by 27 U.S. veterinary schools, including many neurologic cases. The Veterinary Diagnostic Laboratory Reporting System (VDLRS) maintains a data base on selected disease conditions submitted by 29 State and university veterinary diagnostic laboratories throughout the U.S., including the results of histologic examinations for BSE. VDLRS is a cooperative effort of the American Association of Veterinary Laboratory Diagnosticians , the United States Animal Health Association, USDA-APHIS-Veterinary Services' Centers for Epidemiology and Animal Health, and the 29 laboratories mentioned above.

Veterinary pathologists at zoos in the United States routinely conduct postmortem examinations on the brains of zoo animals exhibiting neurologic signs since BSE-like encephalopathies have been diagnosed in seven species of exotic Bovidae at zoos in England.

Q: Has the United States imported cattle from the United Kingdom?
A: Yes. Between 1981 and 1989, 496 cattle were imported from the United Kingdom and the Republic of Ireland. These U.K. imports have been traced, and there are only 4 cattle still alive in the United States (as of February 1999). All of these animals have been under quarantine since April

1996. APHIS is currently attempting to purchase these cattle for diagnostic research purposes. In July 1989, the importation of live ruminants from the United Kingdom was banned.

In addition, 2 head of cattle imported from Belgium in 1996 are now under quarantine. APHIS, in cooperation with the States and industry, continues to purchase these animals for diagnostic purposes. No evidence of BSE has been found in any of these imported animals.

Q: Can we account for all of the U.K.-imported cattle?
A: All but 32 animals have been traced. All cattle of unknown status would be greater than 10 years of age and would have a reduced likelihood of developing BSE at this late date.

Q: Does the United States still permit the feeding of ruminant protein to ruminants?
A: On August 4, 1997, the Food and Drug Administration (FDA) established regulations that prohibit the feeding of most mammalian proteins to ruminants.

Q: What proactive initiatives are underway to educate farmers, veterinarians, extension agents, etc.?
A: An important part of the USDA's active surveillance program is the training of veterinary practitioners in the clinical signs, diagnosis and sample submission for BSE. Videotapes of cattle showing clinical signs of BSE have been distributed to veterinarians in Federal and State governments, veterinary diagnostic laboratories, and pathology departments of veterinary colleges. Microscope slides showing typical BSE lesions have been distributed to the above diagnostic laboratories, and Federal Foreign Animal Disease (FAD) diagnosticians have trained in Great Britain in BSE recognition. BSE factsheets, risk assessments, and reviews have also been sent to State and Federal veterinarians, private practitioners, other industries, and to producers. In addition, APHIS personnel have given numerous presentations to various animal health groups. Finally, over 250 Federal and State veterinarians throughout the U.S. have been trained in the recognition of FAD's including BSE.

Q: What measures has USDA-APHIS taken to prevent the introduction of BSE?
A: To prevent BSE from entering the United States, APHIS has restricted the importation of live ruminants and certain ruminant products from countries where BSE is known to exist. On July 21, 1989, APHIS banned the importation of all ruminants and restricted the importation of certain cattle products from the United Kingdom. On December 6, 1991, APHIS restricted the importation of ruminant meat and edible products and banned most byproducts of ruminant origin from countries known to have BSE (56 Federal Register [FR] 63868 and 63869). Prior to this, the products were restricted by not issuing permits. Certain products cannot be imported into the United States, except under special permit for scientific, educational or research purposes, or under special conditions to be used in cosmetics. These products include serum, glands, collagen, etc. Importation requests for ruminant material are considered individually, and authorization is granted only to those materials that would not allow exposure to ruminants in the United States.

As of December 12, 1997, APHIS has prohibited the importation of live ruminants and most ruminant products from all of Europe until a thorough assessment of the risks can be made. The new restrictions apply to Albania, Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Federal Republic of Yugoslavia, Finland, Germany, Greece, Hungary, Italy, the former Yugoslavian republic of Macedonia, Norway, Poland, Romania, Slovak Republic, Slovenia, Spain, and Sweden. These actions are in addition to those already in place regarding countries that had reported BSE in native cattle.

This action was taken in 1997 because the Netherlands, Belgium, and Luxembourg have reported their first cases of BSE in native-born cattle. There is evidence that European countries may have had high BSE risk factors for several years and less-than-adequate surveillance. Additionally, Belgium reported that the cow diagnosed with BSE was processed into the animal food chain. This science-based decision was made to protect human and animal health, to ensure the security of U.S. export markets, and to shield the safety and the integrity of our food supply.

An interim rule was published and the comment period closed on March 9, 1998. The comments are currently being evaluated. Criteria to assess the risk factors were developed in accordance with the standards adopted by the Office of International Epizootics (OIE). APHIS has received information from a number of the European countries to assist in the risk analysis.

As of December 7, 2000, the U.S. Department of Agriculture has prohibited all imports of rendered animal protein products, regardless of species, from Europe. This decision followed the recent determination by the European Union that feed of non-ruminant origin was potentially cross-contaminated with the bovine spongiform encephalopathy (BSE) agent. The restriction applies to products originating, rendered, processed or otherwise associated with European products.

Q: Have we allowed the importation of cattle semen and embryos from BSE-affected countries?
A: Yes. No BSE infectivity has been detected in embryos, semen, or reproductive tissues of BSE-affected cows and bulls. Embryo transfer experiments are underway in cattle and all interim results are negative, thus far. However, due to the inconclusive findings of the maternal transmission BSE study and two studies which found sheep scrapie to be transmitted via embryo transfer, the importation of embryos from BSE affected and high-risk countries has been suspended.

Importation protocols exceed the recommendation of the Office of International Epizootics (OIE). All bulls producing semen for export to the United States are required to meet all 5 of the following conditions:

1. The semen donor has not been on premises where BSE has occurred within 5 years of the date of embryo or semen collection;
2. The semen donor is not affected with BSE;
3. No progeny of the semen donor is affected with BSE;
4. The parents of the semen donor are not affected with BSE; and
5. The semen donor has not been fed ruminant-derived protein.

These importations were suspended during the first week of April 1996, in response to the reported possible association of vCJD cases in the United Kingdom and exposure to the BSE agent. We have since resumed the importation of bovine semen as there is no scientific evidence to support that semen harbors the BSE agent.

Q: What actions are taken at USDA-inspected slaughter establishments to ensure that cattle with BSE would not enter the human food supply?
A: All cattle presented for slaughter in the United States are inspected before slaughter by FSIS for signs of CNS impairment. Any animals exhibiting neurologic signs during this inspection are condemned, and the meat is not permitted for use as human food. The brains from these animals are submitted to USDA's National Veterinary Services Laboratories for analysis.

Q: Does USDA have a response plan in the event a case of BSE or TSE is diagnosed in U.S. cattle?
A: In 1990, APHIS developed a plan to respond to a confirmation of BSE in the U.S. In August 1996, a joint APHIS-FSIS working group updated this BSE response plan. The purpose of the plan is to provide a step-by-step plan of action in the event that a case of BSE is detected in the United States. The plan outlines those events that should take place, including identification of a suspect animal, confirmation, the epidemiologic investigation, animal and herd disposition activities, and communication of information.

Contacts for More Information About BSE

For animal health issues, contact APHIS' Lisa Ferguson at (301) 734-8073.

All general inquiries about APHIS' role regarding BSE or animal health should be referred to Legislative and Public Affairs at (301) 734-7799.

For questions related to food safety, meat and meat products, or meat inspection, contact: Food Safety and Inspection Service (202) 720-9113

For questions related to human health, Creutzfeldt-Jakob disease, contact: Centers for Disease Control and Prevention (404) 639-7292

For questions related to science, research, contact: National Institutes of Health (301) 496-5751

For questions related to food, feed, drugs, cosmetics, or biological products, contact: Food and Drug Administration (301) 443-1130
